Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-3 (Cancelled).
- 4. (Previously cancelled).
- 5. (Cancelled).
- 6. (Previously cancelled).
- 7-11 (Cancelled).
- 12-13 (Previously cancelled).
- 14-20 (Cancelled).
- 21. (Previously cancelled).
- 22. (Cancelled)
- 23. (Previously cancelled).
- 24-28 (Cancelled).
- 29-30 (Previously cancelled).

31-32 (Cancelled).

- 33. (New) A process for polymerizing olefins comprising contacting olefin(s) with a catalyst system comprising an activator and a catalyst precursor, wherein
 - (a) the activator is a neutral or ionic ionizing salt comprising a cation selected from the group consisting of triphenylcarbenium, dimethylanilinium, and trialkylammonium, and an anion selected from the group consisting of borate and aluminate; and
 - (b) the catalyst precursor is represented by:

LMⁿX₃

wherein M is a Group 4 metal;

- L is an unsubstituted or substituted indenyl, fluorenyl ligand or substituted cycloalkadienyl ligand except for pentamethylcyclopentadienyl;
- X is selected from the group consisting of hydrogen, and unsubstituted and substituted versions of: aryl, alkyl, alkenyl, alkylaryl, and arylalkyl radicals having from 1-20 carbon atoms; and

n is 4.

- 34. (New) The process of claim 33 wherein L is a substituted cycloalkadienyl excepting pentamethylcyclopentadienyl.
- 35. (New) The process of claim 33 wherein L is an unsubstituted or substituted indenyl or fluorenyl ligand.

- 36. (New) The process of claim 33 wherein the activator is a salt comprising a cation selected from the group consistent of triphenylcarbenium, dimethylanilinium, and trialkylammonium, and an anion that is a borate.
- 37. (New) The process of claim 33 wherein the catalyst system is selected from the group consisting essentially of (MeCp)Zr(CH₂Ph)₃/triphenylcarbenium tetrakis(pentafluorophenyl)borate, (1,3-Me₂Cp)Zr(CH₂Ph)₃/ triphenylcarbenium tetrakis(pentafluorophenyl)borate, (Fluorenyl)Zr(CH₂Ph)₃/ triphenylcarbenium tetrakis(pentafluorophenyl)borate, 2-(p-tolylindenyl)Zr(CH₂Ph)₃/ triphenylcarbenium tetrakis(pentafluorophenyl)borate, (1-trimethylsilyindenyl)Zr(CH₂Ph)₃(η⁶(PhCH₂B(C₆F₅)₃))/ triphenylcarbenium tetrakis(pentafluorophenyl)borate or (1,3-Me₂Cp)Zr(CH₂Ph)₃trihexylammonium tetrakis(pentafluorophenyl)borate.
- 38. (New) A catalyst system comprising an activator and a catalyst precursor, wherein
 - (a) the activator is a neutral or ionic salt comprising a cation selected from the group consisting of triphenylcarbenium, dimethylanilinium, and trialkylammonium, and an anion selected from the group consisting of borate and aluminate; and
 - (b) the catalyst precursor is represented by:

LMⁿX₃

wherein M is a Group 4 metal;

L is an unsubstituted or substituted indenyl, fluorenyl ligand or substituted cycloalkadienyl ligand except for pentamethylcyclopentadienyl;

X is selected from the group consisting of hydrogen, and unsubstituted and substituted versions of: aryl, alkyl,

alkenyl, alkylaryl, and arylalkyl radicals having from 1-20 carbon atoms; and

n is 4.

- 39. (New) The catalyst system of claim 38 wherein L is a substituted cycloalkadienyl excepting pentamethylcyclopentadienyl.
- 40. (New) The catalyst of claim 38 wherein L is an unsubstituted or substituted indenyl or fluorenyl ligand.
- 41. (New) The process of claim 38 wherein the activator is a salt comprising a cation selected from the group consisting of triphenylcarbenium, dimethylanilinium, and trialkylammonium, and an anion that is a borate.
- 42. (New) The catalyst system of claim 38 selected from the group consisting essentially of (MeCp)Zr(CH₂Ph)₃/triphenylcarbenium tetrakis(pentafluorophenyl)borate, (1,3-Me₂Cp)Zr(CH₂Ph)₃/ triphenylcarbenium tetrakis(pentafluorophenyl)borate, (Fluorenyl)Zr(CH₂Ph)₃/ triphenylcarbenium tetrakis(pentafluorophenyl)borate, 2-(p-tolylindenyl)Zr(CH₂Ph)₃/ triphenylcarbenium tetrakis(pentafluorophenyl)borate, (1-trimethylsilyindenyl)Zr(CH₂Ph)₃(η⁶(PhCH₂B(C₆F₅)₃))/ triphenylcarbenium tetrakis(pentafluorophenyl)borate or (1,3-Me₂Cp)Zr(CH₂Ph)₃trihexylammonium tetrakis(pentafluorophenyl)borate.